



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,217	03/31/2006	Claus Augenstein	016906-0480	7917
23428 7590 08/07/2008 FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007				
EXAMINER				
WALBERG, TERESA J				
ART UNIT		PAPER NUMBER		
3744				
MAIL DATE		DELIVERY MODE		
08/07/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/574,217

Applicant(s)

AUGENSTEIN ET AL.

Examiner

Teresa J. Walberg

Art Unit

3744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2008.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-29 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 31 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6, 8, 10-19, and 21-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer et al (US 2002/0066553) in view of Olson et al (6,374,911).

Fischer et al disclose a heat exchanger (Fig. 2) for use in motor vehicles (see abstract) including tubes having tube ends and fins arranged between the tubes (Fig. 2), at least one laterally arranged header box (Fig. 1), the header box having a bottom with openings (14) for receiving the tube ends (Fig. 1), a cover (46 in Fig. 2), and an inlet or outlet connecting pipe (36, 38), the heater box being capable of having been at least partially produced by internal high pressure forming of a metallic semi-finished product (Fig. 1), the cover and the bottom being a single piece (Fig. 1), the cover and the connecting pipe being a single piece that could have been produced by IHF (Fig. 1), the header box having at least one open end surface which is closed by a cover which is capable of being soldered into place (Fig. 2), the connecting pipe being arranged laterally on the header box (Fig. 1). Note that product by process limitations in an apparatus claim are considered to be met if the apparatus could have been made by the listed process, whether it actually was or not.

Fischer et al does not disclose the heat exchanger being used as a charge air cooler, the housing having a longitudinal bead, the cover being welded to the bottom, the wall thickness, and the bottom portion having a specified amount of curvature. It would have been obvious to one of ordinary skill in the art to use any desired amount of curvature of the bottom portion of the housing and any desired wall thickness based on the proportions of the other parts of the device and the pressures at which the device was intended to be used.

Olson et al discloses a heat exchanger being used as a charge air cooler (see abstract), the cover being welded to the bottom (col. 3, line 40), and the housing having a longitudinal bead (Fig. 1).

It would have been obvious in view of Olson et al to use the heat exchanger of Fischer et al as a charge air cooler, including providing any needed changes in proportions, the motivation being to enable use of the heat exchanger with other desired fluids, to provide the housing with a longitudinal bead, the motivation being to enable strengthening of the header tank and easier mounting of it in the desired location, and the cover being welded to the bottom, the motivation being to securely hold the parts together.

3. Claims 7 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer et al (US 2002/0066553) in view of Olson et al (6,374,911) and further in view of Heine (DE 19953785)(cited by applicant).

Fischer et al in view of Olson et al discloses a heat exchanger having the claimed structure with the exception of the connecting pipe being bent or curved. However, Heine discloses a heat exchanger having a connecting pipe which is bent or curved (see the pipes in Figs 1 and 2). It would have been obvious in view of Heine to provide a bent or curved connecting pipe for the heat exchanger of Fischer et al, the motivation being to enable easier connection of the device.

4. Claims 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer et al (US 2002/0066553) in view of Olson et al (6,374,911) and further in view of Kamroff et al (2,793,510).

Fischer et al in view of Olson et al discloses a heat exchanger having the claimed structure with the exception of a longitudinal bead of conical design and having a cross section which increases in a direction pointing away from the connecting pipe, while a cross sectional area of the header box decreases.

Kamroff et al discloses a heat exchanger structure (Figs. 2 and 4) including a longitudinal bead (38) of conical design (Fig. 4) and having a cross section which increases in a direction pointing away from the connecting portion (Fig. 4), while a cross sectional area of the flow path decreases (37 and 38 in Fig. 2).

It would have been obvious in view of Kamroff et al to use a longitudinal bead of conical design and having a cross section which increases in a direction pointing away from the connecting pipe, while a cross sectional area of the header box decreases in

Art Unit: 3744

the heat exchanger of Fischer et al in view of Olson et al, the motivation being to provide smoother fluid flow.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Higgins and Ahrens are cited to show heat exchanger structure.

6. Applicants' arguments with respect to claims 1-29 have been considered but are moot in view of the new ground(s) of rejection. The applicants argue that the claims as amended require that the heat exchanger be a charge air cooler. Accordingly, the Olsen et al patent, which specifies that a heat exchanger is used as a charge air cooler, has been added to the rejection.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Teresa J. Walberg whose telephone number is 571-272-4790. The examiner can normally be reached on M-F 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3744

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Teresa J. Walberg/
Primary Examiner, Art Unit 3744

/TW/